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ABSTRACT

Florida junior high school teachers were not using computers to enter course grades, generate referrals, keep attendance and complete other administrative tasks, nor were they attempting to increase their computer skills. To address the problem, an inservice computer training workshop was developed. It was hoped that, as a result of the workshop: (1) 19 out of 25 teachers using an observation checklist would perform all computer tasks listed above; (2) 23 out of 25 teachers would receive a grade of 80% or higher indicating their understanding and proficiency in using computer commands; (3) 20 out of 25 teachers would attempt to secure funds for training, equipment, materials or resources through writing of a grant proposal; and (4) 3 out of 25 teachers would utilize basic computer skills with a minimum of 80% accuracy as measured on a computer skills checksheet. The 12-week inservice training focused on the use of computers and software for classroom management. Participants were provided with hardware and software to keep for the school year, and they were invited to join the school site technology team. Other services were: a communication hot line; assistance from local universities; and a buddy-mentor system. Analysis of the data revealed that all objectives were achieved and the training was beneficial. The teachers liked having the training onsite for economics and convenience, and were satisfied with the performance-based, formative and summative evaluations. The training is outlined in a week-by-week implementation plan. Appendices include: a computer needs assessment form; the teacher self-evaluation of computer skills; a computer keyboarding literacy checksheet; spreadsheet, word processing and software observation checksheets; in-service training concluding the evaluation form; a basic computer skills inventory; and a summation of the results of the survey. (Contains 17 references.) (MAS)

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Increasing the Basic Computer Skills of Junior High School Teachers Through Inservice Training

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By

Dawn Outen

Cluster 55

A Praticum I report presented to the Ed. D. Program in Child and Youth Studies in Partial Fulfillment of the requirements for the Degree of Doctor of Education

Nova Southeastern University

1994

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Approved:

Mar. 22, 1994

Date of Final Approval of report

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First and foremost, I would like to praise God for the strength He gave me in accomplishing this practicum report, Dr. Barry Birnbaum for sharing his knowledge and guidance, Judy Landau for helping me to cross my t's and dot my i's, and my husband for his love and support through all of the madness.

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ABSTRACT

Increasing the Basic Computer Skills of Junior High School Teachers Through Inservice Training. Outen, D., 1994: Practicum Report, Nova University, Ed. D. Program in Child Youth Studies. Microcomputers/Inservice Training/Secondary and Elementary Educators/Classroom Management/Teacher Attitudes/Computer Literacy/Instruction and Curriculum Design/Technology/Computers/Survey/Evaluation

The dilemma: Many teachers were not using computers to enter course grades, generate referrals, keep attendance and complete other administrative tasks, were computerphobic, and not increasing their computer skills.

This praticum report discusses a solution, an inservice training workshop that provides training for teachers to address the aforementioned problem. Included in this document are (1) description of the work setting, (2) study of the problem, (3) anticipated outcomes and evaluation instruments, (4) solution strategies, (5) pre and post surveys, (6) observation check list forms, (7) results, (8) recommendations, and (9) dissemination.

Analysis of the data revealed that an onsite inservice training workshop was beneficial for the teachers as opposed to going to a university. The data also indicates teachers were in favor of having the inservice training onsite, because it was convenient and cost effective. The data also revealed that teachers preferred the performance-based, formative and summative evaluations.

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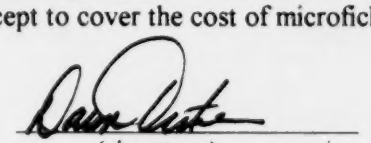
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CHAPTER I

INTRODUCTION

Description of Community

From 1980 through 1993 the population of this writer's community has grown from 40,165 to 65, 689. (City Hall, Demographic Division). This city is growing rapidly, changing from a sleepy agricultural community with a European background into a booming, culturally-diverse commercial and residential community. At one time this city was considered the richest community within this state, because of the agriculture, farming and dairy industries. In 1980 the above industries began to move to other areas in this state, only to be replaced by very expensive homes, shopping malls, and other industries. This demographic change did not diminish the city economically, because the new residents who were moving into the area had a median income from $75,000 and up per household.

However, the real problem is that the new neighbors were of different ethnic, social, and educational backgrounds, moving into a predominantly Dutch, French, Basque, Portuguese and Fundamentalist Christian community. These new residents were not welcomed by the old established community and were excluded from most of the political, social, economic, and educational activities.

This community is comprised of several types of groups. The civic groups in this community include the American Association of University Women, Lions, Rotary, Chamber of Commerce and the Optimists. These groups are concerned with the problems

of education, health, the social welfare of the citizens, better government, delinquency, and recreation.

Cultural groups in this area are segregated and only meet the needs of the members. There are no interactions between any of the cultural groups, socially, economically and spiritually. The largest cultural group is the Portuguese. They consider themselves white. The second largest group is the Hispanics, a portion of whom also consider themselves white because of inter-marriage between white and Mexican citizens for several generations. Blacks and Asians are the smallest groups represented in this community, and at this time there are no organizations representing these two groups. However, the new immigrants from Mexico, legal and illegal, have formed their own social and political support group because of the hate demonstrated by the Americans. There is also another group residing in this community, and they are referred to as the prison families. These are families who come to reside in this community because they have a loved one who is incarcerated in the prison located there. These families are the welfare and low income residents of this area. They usually are not permanent residents, because when the inmate is released, the families move out of this community.

There is a fine arts cultural group that provides art, music, and plays for the community. This group is considered the elite and has a small membership whose primary purpose is catering to the leisure-time interests of the members. The members of this group are majority white, upper-class, with a small minority of wealthy American-born Mexicans. Most of the art forms that are presented are focused on the European culture. Art forms from other ethnic groups are rarely presented. The economic groups that are represented within this community are businesses. According to the City Hall Demographic Division, there are 2,500 businesses. Four of these businesses employ over 500 residents, 32 employ from 100 to 500 residents within the community. However, a great many of the residents work outside of the community. The principal employers are the retailers, medical industries, manufacturers, the school districts, the prison, and the

youth authority. According to the demographics division, the median income per capita is $40,683 and the lowest income per capita is $10,657. The lowest family income is $5,000 per year (428 families), whereas, the highest family income is well over $100,000 a year (382 families). The citizens consist of blue collar workers, professionals such as lawyers, physicians, business executives, police officers, engineers, and teachers. There is a small population of retired people who are on social security and welfare recipients who receive Aid for Dependant Children (AFDC). The average household consists of 3.36 persons. There are single parent households. However the majority of the families have two parents living in the home.

The political circle is balanced equally between Democrats and Republicans with less than two percent affiliated with other political parties. Ross Perot did very well in this community during the 1992 elections.

This community does not have a high crime rate. In fact, it was rated among the top five safe cities in the United States by the Federal Government in 1992. However, each year the schools are plagued with racial unrest, graffiti, and an increasing amount of gang activity.

The religious organizations include the basic denominations of Catholic, Protestant, "born again" Christians and Jehovah's Witnesses. However, the largest religious organizations in this community are the Mormons and the Dutch Reformation. The primary focus for all the aforementioned is to provide moral and spiritual leadership to their own parishioners, but do not involve the total community. The best description of these churches would be exclusive groups with doctrine tailor-made for the needs of each particular group.

Writer's Work Setting and Role

The school is located in a suburb in the southwestern area of the United States with a population of 60,000. In this area, the school is the largest of three comprehensive middle schools. This middle school was originally built to house 800 students. However, during

the 1992-93 school year, enrollment reached 1,325 students. There are nine different ethnic groups represented within a total minority of 46 percent. There are seven different languages spoken by students, and 7 percent of the school population is identified as limited-English speaking.

The curriculum, instruction, activities, staff, and students are a tapestry woven with threads of a positive fiber. Although the population is large, the students enjoy a special one-to-one feeling, due to the school-within-a-school concept. The students are divided into four groups with a teaching vice-principal in charge of each group. This group is "home" to the students for the duration of the day. They depend on the teaching vice-principal for instruction with teachers exclusive to their group. The school believes the potential of all students may be attained through high expectations, a positive and safe environment and meaningful communication.

There is a broad-based core curriculum which includes an integrated literature-based language arts program, social science, math, science, reading and physical education. The core program curriculum is complemented by a computer lab and elective offerings which include art, computer drafting, home arts, chorus, band and computer technology. In addition, many programs exist at the school to meet the special needs of students with identified learning handicapped conditions. These students receive assistance in the Resource Specialist Program or Special Day Classes. English as a Second Language (E.S.L.) and sheltered core classes are of assistance to Limited English Proficiency (L.E.P.) students. Gifted and Talented Education (G.A.T.E.) classes meet the needs of educationally gifted students. Additionally, youth services counseling, career day, academic and physical fitness programs, study skills and performing arts components all relate to the unique special needs of students in this age group.

Recently, this writer transferred to the above middle school and has been there two years. Previously, this writer taught English and social studies on the high school level

in the same district. The writer's role has numerous tasks. Two of these tasks include providing instruction in the classroom setting in the social science content area, and coordinating of two school programs: (1) Adopt-a-School Program, and (2) the Cultural Inclusion Program. Other responsibilities are parent and student counseling, and providing feedback to administrators and core teachers regarding students or any concerns of the parents in the community. Moreover, at the district and school site level, this writer has coordinated educational programs in social studies, English, performing arts, and school clubs, i.e.. Mock Trial, Multi-Cultural Education, and the Writing Celebration. This writer's new role in the beginning of the 1993-94 school year will be Technology Coordinator. The Adopt-a-School and the Cultural Inclusion programs will be assumed by other staff members.

CHAPTER II

STUDY of the PROBLEM

Problem Description

Although there is technology and a program in place for using technology at the school site, teachers did not use computers to enter course grades, generate referrals, keep attendance and complete other administrative tasks. From the beginning of the school year until the end, teachers were and still are bombarded with a crush of paperwork, including report cards every six weeks, attendance, counselor requests for student information, textbook and enrollment cards, and Individual Educational Plans (I.E.P.) for monitoring special education students, weekly progress reports for monitoring students with behavioral problems, lesson plans, test preparations, written responses to parents, and many other paperwork duties in addition to the responsibility of teaching.

Facing this magnitude of paperwork can lead a teacher to frustration, as well as incomplete and poorly drafted documents. This writer constantly heard teachers complain about the burden of paperwork, which they viewed as "interfering with the quality of instruction."

Teachers at this site are concerned about the paperwork overload along with the managing of numerous student behaviors on a daily basis. The teacher morale was often low and their attitude could be hostile. The joy of teaching, for some of the teachers, was nestled somewhere on their desk next to the pen or pencil.

Many teachers at the school were resentful toward the office staff. These teachers believed that many of the tasks they were asked to do completed by the teacher could have been done by the secretaries and should not been forced upon the teachers. Moreover, the teachers felt that the secretaries and clerks have state-of-the-art equipment to complete their record-keeping tasks, whereas, the teachers were still using pen or pencil and maybe a typewriter to complete their tasks. Even the most organized teacher at this site complained about the enormous amount of paperwork that is required of them.

This writer was bothered by the fact that the teachers at this site were not encouraged and supported in the use of technology, and that for the teachers who do use technology, the available equipment and software was broken or outdated and not user-friendly. It is important to note that teachers are not allowed to use or borrow any of the equipment or software that belongs to the office personnel. Moreover, each year the paperwork overload is growing.

Another problem that existed on this campus is that there are computers that are sitting around not being used by anyone. These computers had been vandalized by the students, covered by dust and provided a home for spiders and other insects. The disk drives and screens of the monitors sat in a corner resembling an abandoned neighborhood. The condition of this equipment ranged from fair to poor. Even the teachers who managed to revive a system to use complained about not having the software for this particular computer or not being able to receive service on the equipment if it breaks down again. Sometimes, no attempt at all was made to repair the computer by the technician.

Even if the equipment was in the best condition, there was still another problem on this campus. The majority of the teachers at this school site had limited skills in using a computer; moreover, there were a few computerphobic teachers who would not even consider the idea of using a computer.

Finally, the teachers were not happy with the district's technology committee. Within the district there are two technology committees, one administrative and the other

instructional. These two committees control every decision regarding technology within the school district, except for the teachers who use their own money to purchase the hardware and software. If a school submits a request to purchase hardware or software, either committee may change the order without informing the school of the change. The committee will not address the concerns and desires of teachers. These committees are not even open to outsiders who wish to become voting members. The chairperson on the instructional technology committee expressed to this writer, "There are no rules or regulations established at this time regarding how one can become a member or how long a member can be on the committee. This committee was brought about by the board, and they set the parameters. Only the board can change any polices regarding the committee."

The additional factor in this problem was, if a teacher wrote for a grant to receive training or to purchase equipment, the district would not accept any money for a grant written by anyone that was not on the technology committee. The district did not want to be responsible for allocating and monitoring the funds. The teachers did not feel they had any type of input into the decision-making process regarding technology.

Problem Documentation

The documents used to gather information relating to the problem were (1) a 25 item computer needs assessment (see Appendix A). The survey was placed in the boxes of 50 teachers, and in the teacher's lounge. A memorandum was attached asking the teachers to fill out the survey and return it within three working days. Out of the 50 teachers, 25 surveys were completed and returned within the three days. One week later two additional surveys were returned, but were not included in the results.

Evidence From Survey

Based upon the results of the survey, (see Appendix I) documentation that the problem exists was found: twenty indicated they had limited proficiency or were unskilled in using a computer; nineteen did not know how to enter course grades, generate referrals, keep attendance, or complete other administrative tasks using a computer; three indicated they

were computerphobic; twelve said they do not have access to a computer on site; nineteen did not know the type of computer or software available for teachers to use; seventeen did not know how to integrate technology into the classroom; fourteen did not know how to operate any type of technology; twenty-five did not know of any plans for improving teacher's paperwork overload.

The survey indicated that teachers felt a need for technological help to enter course grades, generate referrals, keep attendance, and complete other administrative tasks. The survey also pointed out that there were teachers who are unskilled or had limited proficiencies in using a computer or any type of technology. Moreover, it was also shown by the survey that a significant portion of the staff was not using computers to complete any type of paperwork. Many of the teachers who completed the survey noted that they were computer illiterate, and would not use any type of technology.

The survey indicated that teachers could not find the time in their daily routine to acquire training, and after work it was equally as difficult because of responsibility of family and other obligations. The teachers also contended that receiving inservice for technology was not a high priority for them at this time. Teachers also confirmed through the survey that the equipment at the school site was outdated and inappropriate for training and use. Furthermore, it was indicated that the software was also outdated and not usable for the majority of the computers. Teachers further expressed that they were not interested in the training, because they were not interested in learning the platform the school was using. As an example, more teachers preferred the Direct Operating System (DOS) platform as opposed to the Apple or Macintosh platform. Moreover, teachers expressed in the survey that the district did not provide adequate information about technology.

Causative Analysis

Why aren't teachers using computers to complete administrative tasks in the classroom, and why haven't the problems been solved? According to the principal, Goldband (1993) "The majority of the leadership in the legislative branch, local and state boards of education, district administrators, and school site administrators do not support and encourage teachers to use technology in the classroom." Moreover, "There is not a mandate or funding within this state to establish training for teachers in public or private institutions." This writer has continually looked for a grant or other funding sources to acquire money to purchase equipment or materials for teachers and still has not found any specifically for the classroom teacher.

In looking through catalogs from universities and junior colleges for technology programs in the education department, the course offerings were a one-year introductory course for pre-service teachers in order to become credentialed, or a graduate level course for students majoring in technology. There was nothing at the university level to train current teachers or to improve their proficiencies in using computers. Courses offered were either very little or too much. According to teachers at the school site, there are some course offerings at university extensions, but they have proven to be inadequate. One reason is that after the course there is not a follow-up course or an opportunity for the teachers to practice what they learned on a continual basis. What does one end up with? Classroom teachers with a certificate in technology who have forgotten what they learned.

In this district, the identified leaders do not support the idea of technology being used by teachers in doing administrative tasks. However, at many levels within the district, secretaries and clerks have state-of-the-art technology to perform their daily tasks, whereas teachers were forced to use outdated equipment or were totally ignored when asking for better hardware and software to perform their duties with efficiency and ease. Moreover, the majority of the teachers at this school site resented the fact that they had to

spend their own money to receive training or to purchase hardware and software in order to have the use of technology in their classroom. Also, teachers who did buy their own equipment had to pay for the upkeep as well. Seeing the secretaries receive the hardware, the training, and any software they wish to have caused teachers to just walk away shaking their heads in frustration.

This type of in-house political play, no direct funding for teachers to purchase equipment or receive training, classes that are either too little or too much, seeing support staff receive state-of- the-art equipment, and indifferent attitudes from the leaders toward the teachers caused the teacher to feel resentment and powerlessness, which discourage the teacher from using technology for any reason.

Finally, another barrier that caused teachers not to use technology in the classroom was being computerphobic. Some teachers were actually afraid and refused to use the computer or any form of technology on the school site. In talking with three of the teachers one morning, all were very adamant about not using computers. When asked why, they all responded either they were too "old to learn," or "it's too hard" and "I'm not mechanically inclined." This type of attitude toward operating the computers by teachers builds extreme anxiety within the teacher when asked to perform various tasks on the computer. This attitude displayed by teachers with computerphobia caused them to shy away from using technology in the classroom.

Relationship of the Problem to the Literature

In reviewing the literature, this writer discovered articles that directly or indirectly supported the problem of teachers who do not use computers to enter grades, generate referrals, keep attendance, or any other administrative tasks. The literature dealt with preservice and inservice training, leadership, state law requirement, designing and developing workstations for teachers, funding for teachers to use technology, and computerphobia among teachers. These articles also discussed the barriers that prevent the use of technology by teachers.

The indirect articles dealt with the psychology of using computers, issues of ethnic and gender attitudes toward technology, school restructuring, and vendor information. The literature reviewed by this writer covered topic areas in sociology, psychology, technology, education and engineering. In analyzing the literature, it was learned by this writer that consideration of the above topics was beneficial in understanding the dynamics and ramifications of the stated problem.

The article written by Bruder (1989) discusses how the schools of education across the United States are stagnant in their computer literacy requirements, which is very much a problem in this writer's state. The fact is, currently there are no requirements in this writer's state for graduation certification for undergraduates. However, the universities have offered degrees in Computer Education on a Master's level. Bruder also discusses, how four of the largest schools of education (in this writer's state) offered deficient computer-based education. Bruder also implies that "because of conflicts between school officials and teachers, there is a resistance among staff members to get training. Finally, Bruder discusses the lack of leadership at the state and district level, in addition to their snail-like pace bringing forth requirements, or mandates for training and funding for teachers to use technology.

In the opinion of the author of this paper, teachers were always aware of the conflicts between the district and the school site administration regarding technology. Often teachers would shy away from the conflict or resist getting involved because of the negativism. One-half of the faculty at this writer's school site did not respond to the needs assessment survey because they felt it would reflect on them in a bad way to support the idea of using technology or being trained, even if they wanted the training or to use technology.

Sturdivant (1989) stresses the point that teachers who take the initiative to take the additional training are often unrecognized by the administration and their peers for their extra efforts. Sturdivant also stresses the fact that teachers do not offer to train staff

members for the following reasons: (1) they are not recognized or encouraged by administration at the district or school level; (2) they are not provided with release time or a stipend to train teachers, (3) the lack of empowerment to design and implement their own technology program at the school site, and (4) the resentment of their peers regarding the fact that they are doing too much. Sturdivant also discusses the lack of money for teachers to replace outdated hardware and software, in addition to keeping the equipment in good condition. Sturdivant also states that this type of action limits or destroys any type of use of technology by teachers.

Chen (1989) describes hardware and applicable software that is not available for the teachers to use. Chen also stresses the fact that teachers are overburdened with paperwork, which hinders the quality of instruction and stifles the efforts of providing a tangible education for students. Chen believes, teachers are not receiving good training and they are not provided with appropriate hardware. Chen implies teachers are frustrated and stressed out because of the paperwork requirements, in addition to giving instruction and other responsibilities. Adding the nuisance of evaluating software, test driving hardware, or trying to fit outdated equipment together to establish an efficient Teachers Support System (TSS) would distance the teacher even further away from using technology.

Fulton (1988) summarized a document from the Office of Technological Assessment (OTA). One of the areas focused on was the role of the teacher using technology. Fulton found that working with computers is hard work and time-consuming for the teacher. He believes that teachers do not have enough time and school districts or school sites do not implement inservice training at the district or school site for the teacher, and went on to say that by not doing this, the teachers would not participate in the inservice training because of the inconvenience. An argument was presented regarding whether the districts or state board of education should provide the inservice training and funding for teachers. The implication by the author was that the school district does not accommodate the

teachers in response to their input. The author did state, however, that this debate between the local district and the state has not been resolved and cannot move forward, because as long as they debate about who should provide the funding, resources, and training of the teachers, time is moving on and the teachers are ineffective.

Weil, Rosen, and Wagalter (1990) conducted a study that discussed reasons for computerphobia. The study concluded that negative feelings held by teachers who were computerphobic were greatly due to (1) being unfamiliar with the computer, (2) deficient typing skills, and (3) past negative experiences using mechanical devices. The study discussed the different attitudes that were based on gender, age and ethnicity. Other terms that were used to describe computerphobia were "computer anxiety," or "techno-stress." In reading the description of the thoughts of the subjects that were computerphobic, certain teachers at my school site flashed through my mind. Some of the thoughts identified were: "I don't understand that!" "This is too much to handle!" "I hope that I have enough time!" "I feel stupid!" "I am going to make a mistake!" "What if I hit the wrong button?"

Each of the articles that dealt directly with the problem stated earlier discuss the same causes as to why teachers are not proficient in using computers. The articles that indirectly related to the problem cited earlier reflected the same causes for the lack of technology being used for instruction by the teacher. The similarities in the articles reviewed were: (1) leadership is non-supportive in local and federal government and state and local school systems, (2) the difficulty in finding funds to support projects, the purchasing of equipment and inservice training, (3) fear of using technology (gender, ethnicity, social issues were revealed in the relationship of fear in using technology), and (4) the hesitancy of teachers using technology or in using computers as a support or a teaching tool. Hardware and software were discussed in three areas: (1) new technology, (2) computer design work stations, and (3) availability of hardware and software.

The differences among the articles are as follows: Bruder's (1989) article talked about the lack of extra courses in computer literacy for teacher credentialing and the stagnation of literacy requirements among the universities. The article also speaks about other obstacles of technology training: (1) Time is of essence, especially in the undergraduate studies. Bruder notes that the colleges are focused more on liberal arts education rather than specialized programs, and they don't allow time to incorporate technology into the student's schedule. (2) The reluctance of education professors to use computers. (3) There is a resistance among tenured college professors who are over 50 who have not used computers and feel they are not going to use them now. (4) There seem to be problems in integrating technology into methods courses. (5) Instructors will fight the use of computers, because they don't have the time to teach computer skills to the students along with the class objectives.

Sturdivant (1989) focused on the inadequacies of preservice and inservice for teachers, and the failure of peer recognition, teacher rewards and incentives for the teachers who are involved with technology. Paperwork overload which leaves little time for staff development and insufficient opportunities for teachers to see model applications of technology were stressed by the author. Unsuitable software and hardware for teachers to use was another problem the writer discussed. The writer reflected that many teachers were not given funds to keep the computers in working order or purchase better software. The author emphasized the main complication of getting good hardware and software was the inadequate evaluation procedures and teacher access to computers.

Fulton (1989) discussed the problem of deciding who is responsible for training the teachers, the universities, the local school boards or the state board of education. The writer indicates that valuable time is being lost while a decision is being argued as to whom should train teachers. Another problem expressed by Fulton was incompetent preservice and inservice training.

A study conducted by Weil, Rosen, and Wagalter (1989) validated teachers' attitudes, anxiety and computerphobia. This study focused on the reasons educators fear using technology and the negative responses from these teachers. The study examined the causes and reasons and found that teachers who have had a bad experience with technology at a young age are not going to use computers.

Scrogen's (1989) article was based on a critique of a report completed by the U.S. Office of Technology (OTA). The portion that was discussed by Scrogen emphasized the difficulty of integrating technology into the schools, and the loss of benefits to teachers and students. Scrogen is very critical that teachers are not empowered or encouraged to use technology, which is a big problem among educators.

Chen (1989) discussed the difficulty of teachers completing administrative tasks without the use of computers, the fact that hardware and software are not accessible and the scarcity of technical expertise. Chen's concerns were the failure to provide quality hardware and software for teachers, in addition to the high cost of hardware development for teachers by the technology industry. Chen stressed that there are no platforms for teachers that are user friendly, efficient, or productive.

The authors Bitter and Yole (1988) implied in their article that fundamental goals are not stressed in improving teacher competence with current and future technology. They embrace the idea that since there are no goals set for teachers using technology, the use of technology by teachers is doomed. Without established goals, it will be difficult for teachers to have efficient inservice training at any level. The few goals that are set by schools, local and state school districts do not include strategic long-range planning in using technology, nor do they include evaluation for quality hardware, software, and technicians. The article stressed how the technology departments are not in place and there is no qualified leadership to advocate the use of technology in education.

Marshall (1982) argued that many administrators do not capitalize on nor benefit from technology. Even though there is technology being used, there are no established

procedures to keep technology current for teachers. This article also discusses how administrators lack the skills to incorporate technology within the schools.

This has been true of the administrators in this writer's school district. It seems that they have their heads in the sand or they are playing political games with other issues and not focusing on the future of technology. One problem this writer has noted with administrators is that they don't listen to teachers, which is what Marshall implies in the article.

The major findings of Martinez and Mead (1988) identified problems and attitudes toward technology in education. Complex obstacles of poverty, ethnicity, illiteracy of parents and community members, economics and educational environment all have a direct influence on technology's use in education across the nation according to the assessment. The document discussed how relationships between administrators, teachers, staff, students, parents, and the community that are not in accord could stymie implementation of technology within the schools. This text also provided information regarding the problem of perception of inadequacies of ethnicity, gender and of underprivileged parents and students, and the resistance to technology among the above groups. The text illustrates the problem of the schools not understanding the competence of minority groups, and the negative perception toward these groups and minority teachers limits their success in using technology.

The full potential of using technology by educators on all levels is being ignored suggests Pogrow (1988). The author believes that technology coordinators only focused on expanding the use of technology and disregarded the fact that computers can improve the quality of education. In other words, they are expanding technology, but no one is using it.

One example pointed out in the journal was that the conditions of the schools did not truly enhance learning by using technology for the following reasons: (1) misuse of automated wordprocessing, (2) drill and practice, (3) teachers not skilled in how to use

more sophisticated teaching technics and technological tools in instruction, (4) and more importantly, different approaches of teaching technology are not used to address the needs of disadvantaged students.

The conditions listed above that Pogrow discusses have been observed by this writer, in addition to experienced personally as a female and minority. Certainly, there was too much focus on drill and practice and the use of wordprocessing. Most students at this school site were not successful in using technology, because teachers did not take into account the various learning styles of their students. Furthermore, teachers at this school site on a whole did not expand their technical expertise and knowledge of emerging technology and how it can be used in classroom management and instruction to improve the quality of education. What the author is saying does exist and was a problem at this school site.

Chan, Fortunato, Holte, Morse and November (1988) dicusses how too many obstacles exist that prevent teachers from exploring new roles. The obstacles mentioned in the reading were poor evaluation criteria, ill-conceived contracts for teachers and very little time for teachers to research, plan, share, and attend workshops connected with technology. The authors contend that teachers are so bombarded with the responsibilities of teaching that there is virtually no time for the teacher to assume the new role of using technology. Moreover, it is expressed in the article that not redefining the role of the teacher to acquire and master technology is detrimental to the educational progress for everyone involved.

This writer agrees with the authors, because the same problems existed at this writer's school site. There was no time given to the teachers to acquire technical knowledge that would allow growth in developing technical abilities, teaching strategies, and long range planning in developing a sound technology department. As the authors imply, there was not enough time given to educators to shift into the new role of using technology for classroom management and instructional techniques.

Management continues to be a problem for teachers to acquire training because of poor leadership, according to Hennecke (1988). The article talks about inferior leadership that does not take into account the obstacles that could have a negative impact on a training program. Barriers listed in the article were defective objectives, inconsistent evaluations, and the vision not shared by all. The main problem reflected in this article is that management style that deals with imparting information and not attempting to change behaviors of personnel to accept the information leads to more problems for management.

The research study that was conducted by Weil, Rosen and Sears (1987) pointed out three specific psychological reactions to the computerphobic which causes a negative afflictive reaction with concomitant behaviors and cognitions, (1) opposition, (2) apprehension, and (3) fear. As explained in the study, these three types of psychological behaviors exist among some of the educators. The discussion of computerphobia is wide-spread and is a problem not recognized and dealt with by educators. The study gave descriptions of the behaviors of persons that were computerphobic. These behaviors were recognized by this writer at the school site. For example, teachers would avoid computerized machines, and could not purchase push-button kitchen appliances, especially sophisticated, programmable ones. Several teachers that this writer has talked with exemplify the study description, since they would avoid contact with any type of technology, not only at school, but also at home. The only way many of these teachers would buy any technology products, is if someone else could operate them. The fears mentioned in the study are the fears that most of the teachers have expressed verbally or demonstrated. This posed a real problem for incorporating technology into the school.

Cicchelli (1984) conducted a study in computer literacy for an inservice training project for high school teachers in various departments. The theory of the study was fear of change and failure are frequent factors in computer education. One conclusion brought about in this study is that teachers will not attempt to use any type of technology because

of the fear of failure in using technology. It also states that fear is very real and overwhelming to one who is computerphobic, and not taken seriously by those who are not computerphobic. Given that this phobia is widespread among educators, the results are evident in the stagnation of technology in education. To validate the hypothesis of this study, interviews and questionnaires were gathered from high school teachers from many areas.

The survey that was distributed by this writer and personal conversations with the teachers also indicated that there were teachers at the school site who were very afraid and have difficulty in using computers. These teachers were viewed by other teachers as silly or too old to change, along with other negative feelings toward them. The problem of computerphobia at this school site has contributed to the problem of stagnation in implementing an inservice training program.

This writer believes that teachers have different learning styles when placed in the classroom as students. However, when teachers were being trained, the learning style as well as the instructional design for inservice training was not taken into consideration. Inservice training programs that are thrown together haphazardly do not work and are ineffective.

This hypothesis is also shared by Gange, Briggs and Walgner (1989). They believe with advances in computer technology, educators can see revitalized efforts in the field of education, however, teachers' cognitive learning souls must also be seriously taken into consideration. For teachers, there are no high standards of instructional design.

This writer has been a witness to inservice programs that did not provide quality training for teachers. Many teachers have walked away feeling frustrated because the inservice training was not addressing the cognitive learning style of that teacher. Having low standard inservice training is problematic. Teachers would not participate because they have experienced inservice training that doesn't work.

The perception of minorities and women being technical illiterates was a key obstacle for inclusion of these groups in planning and implementing technology programs. Moreover, the scarcity of quality hardware and software discussed in the literature was often real for schools in this writer's school district. The social, political psychological and economical impact of teachers not using technology, carefully thought about and written in the literature, was indeed a problem this writer faced. Along with inferior leadership, planning and program and product evaluation added to the problem of using technology in the educational process. The literature that was reviewed was a validation that there are problems that are not exclusive to this writer.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectations

The following goals and outcomes were projected for this practicum.

Teachers will use computers to enter course grades, generate referrals, keep attendance and complete other administrative tasks.

Expected Outcomes

Nineteen out of 25 teachers using an observation checklist evaluation form will demonstrate how to enter course grades, generate referrals, keep attendance and complete other administrative tasks using a computer (see Appendix D).

Twenty-three out of 25 teachers will receive a grade of 80 percent or higher indicating an increase in their understanding and proficiency in using computer commands, based on an observation checklist form (see Appendix C).

Twenty out of 25 teachers will attempt to secure funds for training, equipment, materials or resources as measured on grant writing proposal completed by teachers.

Three out of 25 teachers will utilize basic computer skills with a minimum of 80 percent accuracy as measured on a computer skills check list.

Measurement of Outcomes

(1) The purpose of the self-evaluation of computer skills was to appraise the knowledge of the participants computer ability. (see Appendix B). This instrument was given at the first inservice workshop. Each teacher was given ten minutes to complete the measurement. The trainer will distribute the instrument and explained the purpose and

direction on how to finish the computer skills instrument. Each instrument was collected and reviewed by the trainer and returned to the participants at the end of the first session. (2) The computer keyboarding literacy observation check list (see Appendix C) has 20 items that assessed each participant's keyboarding competency before implementation begins. This instrument was be administered by the trainer at the beginning of the second session. The trainer checked off each objective as it was performed by the participant. The time allotted for each participant to demonstrate their competency was 10 minutes. (3) The purpose of the spreadsheet observation check list (see Appendix D) is to verify that each teacher has mastered how to enter course grades, generate referrals, keep attendance and complete other administrative tasks using a computer. This checklist has 20 items which were administered by the trainer to the teachers who believe they are prepared to meet the objectives. Each teacher will demonstrated the specific objectives as the trainer checked them off. The time allotted for this measurement was 20 minutes. (4) The aim of the wordprocessing observation checklist (see Appendix E) was to confirm that the each teacher can use wordprocessing software to create documents and forms. There were 14 objectives listed on the measurement. Each teacher produced an end product demonstrating each objective for evaluation by the trainer. Each hard copy was collected and scored by the trainer. Only the teachers who have met 80 percent of the objectives continued on to the next objective, if the objective were less than 80 percent, the teacher would continue until 80 percent of the objective was met. The time allotted for this demonstration was approximately 15 minutes. (5) The intention of the software observation check list (see appendix F) was to confirm that each teacher can describe and explain the functions of the software being used in this session. There were nine objectives to be met. Each teacher recorded the answers of each objective in narrative form. The trainer provided the check list to each teacher, asking the teachers to return the answers at the next session, where they were collected, reviewed and returned to the participants. Time allotted was one week. (6) The basic computer skills inventory (see

Appendix G) assessed if the computerphobic teacher could master the elementary skills of using a computer. There were eight objectives listed and six of these objectives must have been met in order to show competency in using the computer. The inventory was distributed and explained at the beginning of the session. Each objective was checked off as it was demonstrated. The time allotted for demonstrating their proficiency was fifteen minutes.

The purpose of using the aforementioned measuring instrument was to provide continuous feedback to both the participant and instructor concerning learning successes and failures. These types of instruments allowed immediate feedback from the instructor to the learner, which reinforced successful learning, quick identification of problem areas and provided immediate correction. These types of observational processes and instruments were useful in monitoring the participant's progress as a group or on an individual basis. Except for the self-evaluation checklist of the computer skills, each observational checklist were scored by the observer at the completion of each objective. Each participant was expected to show mastery of each objective before it could be checked off by the observer to certify participant competency.

The measurements used were designed by this writer for specific performance-based rating. Moreover, the evaluation procedures this writer used were based on "placement evaluation," which determines entry level skills, "formative evaluation," to determine learning progress and "summative evaluation" to determine objective achievement of students at the end of the training.

Furthermore, the aforementioned evaluation procedure provided feedback from the students on the quality of the inservice training. During the last session the participants evaluated the inservice training using a concluding evaluation (see Appendix H) to assess the strengths and weaknesses of the inservice workshop. This evaluation was given at the end of the session to the participants. They were be directed to leave the evaluation with the trainer before they left.

Mechanism for Recording Unexpected Events

While implementing the practicum there were "unexpected events" that occurred. In order to keep account of the events and the reaction to these events, this writer maintained a journal to record the events as they occur. The journal provided an interpretation of what took place, when it occurred, who was involved, and other elements.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Possible Solutions

There are possible solutions to address the problem of teachers not using computers to enter course grades, generate referrals, keep attendance and complete other administrative tasks. While reading the literature, this writer found several solutions that would be applicable to the problem of teachers who do not use computers for such tasks.

Sturdivant (1989) offers the solution of investing in the preparation of teachers to master technology. The author states that school districts play a critical role in the teacher training process. In the article, as an example, the author illustrated the success of the Houston Independent School district, which established a technology department in January of 1992. The district coordinated a training program which included an instructional team of model teachers with technical expertise in distinct areas of technology. The team offered training to teachers in their school district. The plan is to train teachers throughout the district. This format can easily be used by this writer in training the teachers at the school site. An additional solution offered by the author is to offer incentives for teachers who received the training, as well as the teachers who provide the training in technology.

Bruder (1989) explains that for experienced teachers inservice training is the only way teachers will be able to acquire the knowledge they need to use technology. Included in the article is a model of a program titled Guideline for Model Preservice Technology Course. The journal noted the best method might be that people get trained in the field rather that in the schools of education. It is difficult for teachers to receive training at universities while working. This writer offered an in-depth inservice for teachers at the

school site for the convenience of the teacher, as well as saving any added expenses that the teacher would have to pay attending a university.

Chen (1989) suggests that appropriate hardware and software for the teachers to complete administrative tasks should be in place because of the increasing repetitive demands that are placed upon a teacher in processing data related to the classroom." Also suggested in the article, A Teacher's Support System (TSS) is a solution that will improve the quality and swiftness of the tasks for which teachers are responsible. Moreover, by the teacher using the TSS the data will be more accurate, readable, legible, and organized with an attractive visual format.

There were no available funds for this writer to purchase new hardware and software to use for training the teachers. However, the solution for this problem was be to use the existing computer lab and to find a technician to repair existing hardware as needed and place it in the teacher's classroom. The software was provided by a local university that has public domain software that will accomplish the job.

Finally, the best possible solution in addressing computerphobia was to have the teacher become familiar with the computer. Scrogen (1989) explains that being sensitive to the anxiety that many teachers hold toward technology helps to ensure success. In providing this solution for computerphobia, this writer used five of the eight keys in Training Success offered by Scrogen: (1) emphasize hands-on training, (2) use credible instructors, (3) build in close support, (4) increase access time, and (5) build a tool focus.

Weil (1990) discussed how, bad experiences w... mechanical devices, gender, and ethnic stereotyping are some of the causes for computerphobia among teachers . In this study, subjects were interviewed regarding their respective computer and mechanical styles and media influences on the development of their feelings about computers. It was discovered that using effective non-evaluative introduction of technology while training teachers would be more effective in breaking down the barriers of fear of computers. Moreover, this study discussed how women and blacks and senior citizens are considered

to be inept by the society at large in using technology, and the only group that is perceived to be successful with technology is white males. In actuality, according to the study, this is a myth.

For a mild case of computerphobia, the treatment can be accomplished within five hours. However, for more severe cases, it would take much longer to reduce the fear. There are five session-by-session goals: (1) Myths and Realities About Technology; (2) Fears and How to Stop Them, (3) Computer Technology in Your Future, (4) Things That Go Bump in the Night, and (5) Summary and Closure. This writer felt that the information provided in these five sessions would benefit the participants.

There are other solutions mentioned in the literature that are deserving of mention but not feasible for this writer to implement. For instance, Chan (1988) suggests redefining the teacher's role, an overwhelming task for this writer to implement in such a short period of time. Moreover, the article speaks about restructuring schools as a solution to increase the use of technology in schools. This type of activity requires organizational power of administrators.

Provide teachers with extensive access to computers in a single targeted area at various grade levels, train teachers in state-of- the-art teaching techniques with state-of-the-art platforms and software are solutions, suggested Pogrow (1988). These types of solutions are decisions that need to be planned and implemented by a committee of stakeholders, along with strategic long-range planning. This writer is not empowered to commit to such a enormous undertaking. Also, to implement this type of process, an investigation of research must take place. This would result in other overpowering responsibilities, being that school administrators will not provide release time on a long term basis to achieve these solutions.

The solution offered by Hennecke (1988) of teaching new behaviors to educators, is not in control of this writer. Even though, this writer would truly prefer to change the behaviors of some teachers, it is not a practical venture.

Description of Selected Solution

At this school site, teachers were not using computers to enter course grades, generate referrals, keep attendance and complete other administrative tasks. The intent of this writer was to provide inservice training for teachers in using computers as a solution to the problem. The twelve-week inservice training focused on the use of computers and software for classroom management, in addition to other relevant information that would be useful for the teacher. The software and hardware were provided only to the participants in the inservice training program. The participants will be able to keep their equipment until the end of the school year. However, they may check out the equipment at the beginning of the subsequent school year. In addition to the training, teachers will be invited to become member of the school site technology team.

Other solutions implemented were: an ongoing communication hot line to inform teachers about emerging technology, funding, grants, resources, materials, conferences and seminars in technology; assistance from the local university to assign qualified technology mentors to teachers as a human resource; and to form a buddy system between teachers to build a close support system to network at the school site. This mentor and buddy system will be a technology support system for the teachers to address problems that arise while using computers.

Reasons why this writer believes that these solutions are effective is because, (1) it fosters teachers helping each other in acquiring a new skill. (2) It allows teachers to collaborate with each other on specific problems and resolve them; moreover, there was immediate instructional support from the trainer, (3) the inservice workshop being offered was cost effective, because teachers did not have to pay for the workshop, buy materials, incur other expenses such as gas for traveling to another site or buying snacks to compensate for missing dinner if the workshop was offered at a later time, (4) the training is convenient because it is located on the school site, the equipment is assessable, and the

resources are brought to the teacher; (5) time management is also easier because the workshop is offered after school once a week, which does not interfere with outside obligations and responsibilities by not offering the workshop at a later time, (6) the inservice workshop was free and was not being offered for the teachers in this area.

It is the opinion of this writer the solutions selected were justifiable for this writer to implement, considering it was in the control of this writer, sensible because the solutions selected were practical and had been successfully used by other experts in this field.

Another factor was that this proposal is agreeable with the teachers and administrators at the school site to execute. This writer believes that the success of this program implemented laid in the support of the participants who are involved.

Finally, based on the survey conducted , literature reviews read, informal and formal conversations with other educators by the author of this proposal, there was a need for this type of inservice training for educators.

Report of Action Taken

Before Implementation

Preceding the implementation, this writer completing the following phases.

Phase I: Planning and Coordinating Inservice for Teachers

In the planning stage this writer wrote down goals that needed to be accomplished, based on the teachers' survey given in the spring. (See Appendix A). Consideration was given to the specific skills, abilities and knowledge the teachers needed in order to be proficient at entering course grades, generating referrals, keeping attendance and completing other administrative tasks using a computer. Moreover, plans had to be generated to establish goals for working with computerphobic teachers, grant writing, and disseminating information regarding technology. In order to assess the abilities, skill levels and knowledge of the participants, this writer developed a self-evaluation measurement. The results of the survey indicated the level of instruction that should be provided. All the measurements designed by this writer were performance-based

measurements, and provided immediate continuous feedback for the participants and the facilitators concerning success and failure. These measurements also determine the entry level skills of each participant. In planning for the evaluation of the inservice training, this writer adopted the "formative evaluation" model, which evaluated the learning progress of the participants, and the "summative evaluation," which determined the objective achievement of each student at the end of each training session when needed.

Phase II: Set-up

After the goals, objectives, measurements and surveys were completed this writer began Phase II. This phase consisted of gathering information, researching, locating hardware, software, and a room in which to present the workshop. Furthermore, this writer had to recruit teachers to help implement the inservice training and guest speakers to provide additional resources, information and material for the participants. A very important step accomplished was to obtain permission from the administrator as well as schedule the computer lab to make sure that the time and day of the inservice were placed on the school calendar to guarantee that the room would be available. It is wise to schedule the computer lab as soon as possible to prevent conflicts and achieve the desired time. During Phase II a calendar plan was developed for the whole three months of the implementation.

Phase III: Staff Input

Information about the inservice training was disseminated, the writer asked the staff to review the proposed plans for the workshop and to submit their input. During a faculty meeting, a written copy of the proposed plan was presented to the faculty. The staff was asked to review the proposed plan for the workshop and to write any comments or ideas and return it to my box on the following Monday. Finally, this writer edited the plan based on information provided by the teachers, placed a sign-up form in the teachers' boxes and asked for the forms to be returned by Friday of that week. All was in place. The action required to begin the workshop was completed.

During Implementation

Week One

This writer (facilitator) provided an overview of the inservice training, including time line and revised schedule, and the evaluation procedures were explained. After the overview was provided, the facilitator presented the self-evaluation measurement. (See Appendix B) The amount of time it took for the teachers to complete the checklist was greater than the facilitator anticipated; therefore, the historical presentation that was planned was cancelled. While the checklists were being scored by this writer, the co-facilitator gave a tour of the computer lab and explained about the types of computers and their various functions. After the measurements were scored, they were returned to the participants, indicating their strengths and weaknesses. The teachers were very excited and wanted to get started, and with this response this writer sensed that the inservice workshop was off to a good start.

Week Two

At the beginning of this workshop, a ten-minute video prepared by this writer was shown to the participants. The video demonstrated how the computer worked and some computer terminology. At the conclusion of the video, instruction was given on keyboarding. The participants were given their keyboarding checklist as a guide for the objectives that they should accomplish by the end of the workshop. The participants began with the step-by-step directions of the facilitator. As the participants completed each objective the facilitators signed the objectives off. Five of the participants were unable to complete the objectives and were given permission to complete the objectives by the following week. However, a demonstration of the objectives will be observed by either of the facilitators.

Week Three

It was planned by this writer earlier to use two types of software for this workshop. However, it was suggested by the co-facilitator to use Powergrade, which met the needs of classroom management in one software package. In making the change, new observation checklists, (see Appendix F), were composed by this writer to reflect the new software to be used during this session. Instruction was given and the participants were asked to work together in pairs, completing the objectives as the facilitators monitored the inservice training and assisted those who needed help at the conclusion of this workshop. All of the participants completed the objectives; however, the workshop went one hour past the time scheduled.

Week Four

In this session, instructions were given on how to use the spreadsheet in Powergrade. After the instructions, the observation checklists for spreadsheets were given to the participants, and the facilitators monitored and assisted the participants as needed. Again the participants worked in pairs and completed all of the objectives required for this workshop. However, once again the workshop went over the time scheduled.

Weeks Five-Eight

These workshops concentrated on training the participants in creating, modifying, viewing and printing reports. Furthermore, these workshops focused on recording grades, keeping attendance, logging text books, and averaging the grades. As described before, instruction was given to the participants, observation checklists were presented, the facilitators monitored and answered questions, and the objectives were checked off as completed.

Week Nine

In this session, guest speakers from different computer vendors presented demonstrations on software and hardware for educators. The facilitators also shared literature and lesson plans that teachers could implement using computers. Originally,

this writer had scheduled university graduate students to make a presentation for this workshop. However, they cancelled at the last minute. Knowing that there is always the possibility that cancellations can occur, this writer made arrangements with alternative guest speakers who were readily available.

Week Ten

The principal told this writer that each teacher who participated in the workshop would be able to keep a computer in their room for administrative record-keeping. However, because of the theft at another school, the computers were no longer available for the teachers to keep in their classroom, but they could have access to the computers after before and after school. Therefore, the scheduled session on classroom safety tips and how to set up work stations was changed. The participants elected to work with the computer on various tasks. The facilitators continued monitoring and assisting the participants.

Week Eleven

The workshop facilitators presented a workshop on grants. The workshop consisted of providing each of the participants with literature, resources and strategies on how to apply for a grant on state, local and federal levels. The participants worked together in groups reviewing the material and completing a mock grant-writing exercise. Following the group activity, there was a discussion about forming a grant committee at the school site to apply for grants. This writer hoped that such a committee could be formed. Although the participants agreed that the workshop was beneficial, they resisted in forming a grant-seeking committee.

Week Twelve

Before the final workshop took place, it was decided by the facilitators to move the workshop to the library. When the last workshop was held in the computer lab some teachers were working on the computers. This was distracting for the teachers who were involved in a non-computer application workshop.

The facilitators congratulated the participants for their completion of the inservice training workshops. Next, the facilitators explained how the inservice program evaluation process would proceed: (1) Each participant was asked to get in a group of five and discuss, decide, and record the positive and negative responses regarding the workshop. Each group was given thirty minutes to complete the task; (2) each group was responsible for presenting their findings to the larger group; (3) After each group presented their findings, the facilitator led a discussion with the group; and (4) the facilitator handed out the evaluation forms for the participants to complete and return to the facilitator at the end of the workshop (see Appendix G). To end the inservice training workshop, the principal congratulated the participants and presented each with a certificate of completion.

A separate inservice workshop was held in this writer's classroom for the one computerphobic teacher who remained. As mentioned before, the other two teachers who were computerphobic were transferred to the new junior high school. However, they are still interested in receiving the inservice workshop when it is offered at the new site. The one participant in this inservice workshop worked with the writer until the objectives were met. The computerphobic teacher enjoyed being alone and also commented, " It is nice learning without someone watching me. I can take my time."

CHAPTER V

RESULTS, DISCUSSION AND RECOMMENDATIONS

Many teachers were not using the computer for classroom management. These teachers were still using paper and pencil for entering course grades, generating referrals, maintaining textbook records, writing anecdotes, lesson plans, tests and other administrative tasks. This type of practice was a problem for the teacher because it was time consuming and created a paper overload for teachers. Another problem was that teachers were not encouraged by school administrators to use computers or technology for any reason. Also, there were teachers who were computerphobic. Moreover, teachers were frustrated because receiving training was difficult because of the location of training, time restraints, responsibilities, and the expense involved. Although there were other problems, such as each teacher not having their own work station in their classroom, lack of funds, and the frustration of outdated software and equipment, this writer believed, after researching and much consideration of solutions provided by other authors, that the best solution in solving the problem was to implement an inservice workshop for the teachers which would serve as a gateway to address the other problems as well over time.

Results

This writer collected and interpreted the results of the data for each inservice participants on a weekly basis. Results were calculated each week to monitor the progress

of each participant. In analyzing the results of the measurements, this writer compared the pre-implementation scores with the post-implementation scores to conclude if participants had increased their computer skills. The results of this data are presented below.

Objective One

Nineteen out of 25 teachers using an observation checklist evaluation form will demonstrate how to enter course grades, generate referrals, keep attendance and complete other administrative tasks using a computer (see Appendix D).

This objective was achieved in that 15 out of 25 teachers using an evaluation form demonstrated how to enter course grades, generate referrals, keep attendance, and other administrative tasks using a computer. Before the implementation, none of the teachers had the skills to master the objectives. (See Table One). After the inservice training the participants mastered the objectives. (See Table Two).

Table One

Inservice Training Results Objective One

Y= Yes N=No Before Implementation

Teachers	Objectives: Enter Course Grades	Keep Attendance	Generate Referrals	Write Reports	Text book Accounting
001	N	N	N	N	N
002	N	N	N	N	N
003	N	N	N	N	N
004	N	N	N	N	N
005	Y	N	Y	Y	N
006	N	N	N	N	N
007	N	N	N	N	N
008	Y	N	Y	Y	N
009	N	N	N	N	N
010	Y	N	Y	Y	N
011	N	N	N	N	N
012	N	N	N	N	N
013	Y	N	Y	Y	N
014	Y	N	N	N	N
015	N	N	N	N	N

Table Two

Inservice Training Results Objective One					
	Y= Yes After Implementation				
	Objectives				
Teachers	Enter Course Grades	Keep Attendance	Generate Referrals	Write Reports	Text book Accounting
001	Y	Y	Y	Y	Y
002	Y	Y	Y	Y	Y
003	Y	Y	Y	Y	Y
004	Y	Y	Y	Y	Y
005	Y	Y	Y	Y	Y
006	Y	Y	Y	Y	Y
007	Y	Y	Y	Y	Y
008	Y	Y	Y	Y	Y
009	Y	Y	Y	Y	Y
010	Y	Y	Y	Y	Y
011	Y	Y	Y	Y	Y
012	Y	Y	Y	Y	Y
013	Y	Y	Y	Y	Y
014	Y	Y	Y	Y	Y
015	Y	Y	Y	Y	Y

Objective Two

Twenty-three out of 25 teachers will receive a grade of 80 percent or higher indicating an increase in their understanding and proficiency in using computer commands, based on an observation checklist form (see Appendix C).

This objective was achieved in that 15 out of 25 teachers received a score of 80 percent or better (See Table Three), indicating there was an increase in their proficiency skills using computer commands.

Table Three

Inservice Training Results Objective Two		
	Scored Below 80% Before Implementation	Scored above 80% After implementation
Teachers	N=No	Y=Yes
001	N	Y
002	N	Y
003	N	Y
004	N	Y
005	N	Y
006	N	Y
007	N	Y
008	N	Y
009	N	Y
010	N	Y
011	N	Y
012	N	Y
013	N	Y
014	N	Y
015	N	Y

Objective Three

Twenty out of 25 teachers will attempt to secure funds for training, equipment, materials or resources as measured on grant writing proposal completed by teachers.

This objective was achieved in that ten out of 25 teachers did attempt to secure funds for training, equipment, materials or resources, as measured on a grant writing proposal completed by teachers.

Objective Four

Three out of 25 teachers will utilize basic computer skills with a minimum of 80 percent accuracy as measured on a computer skills checklist.

This objective was achieved in that one out of 25 teachers utilized basic skills with a score of 80 percent accuracy as measured on a computer skills measurement. (See Table Four).

Table Four

Inservice Training Results Objective Four		
Computerphobic Teachers	Participation	Met Objectives
001	No	No
002	Yes	Yes
003	No	No

Discussion

Before the implementation, the teachers had little or no computer knowledge or expertise in completing administrative tasks, basic computer skills and computer commands. However, after the inservice training the participants had increased their computer skills and competence.

There are several factors that made this inservice training workshop successful. Even though the results of the inservice workshop were positive, there were some problems that

did arise during the implementation. This writer will discuss the positive and negative events in the following pages.

The inservice given onsite was the best method for the teachers who were interested in learning to operate computers and gain other information about technology. Bruder (1989) believes that experiencing teacher inservice is the only way teachers will be able to achieve the knowledge they need to use technology. In fact, while facilitating the inservice workshop, this writer discovered the fastest way to get teachers to use technology is to get them involved using one basic software application. Since the inservice was located on campus, the teachers had access to the computer lab, in addition to having all of the software and materials provided at a convenient time and at no cost, according to the teachers. On their inservice workshop evaluation they described the inservice as "wonderful."

Teachers were excited and enthusiastic about accomplishing their objectives, which might account for the perfect attendance of all the participants. Also, there was great commitment. Before and after school, this writer observed teachers in the computer lab working on improving their computer skills to meet their objectives.

During the inservice, the attitude of the teachers was positive, and they seemed less frustrated and more amiable toward each other. The behavior the teachers were displaying led this writer to the conclusion that because thy had a common interest that they shared with each other, the frustrations were fading. They supported each other when they had problems as they practiced their skills during the week. When tasks were really difficult, they would not leave until the teacher who was having the problem accomplished the objective independently.

The observation checklists were very effective in guiding the participants in which skills would be needed to master and in identifying their strengths and weakness. The observation checklists were easy for the facilitators to score and give immediate feedback to the participants. Weil (1990) implies that using effective non-evaluative measurements

is effective for inservice training. The observation checklist is a non-evaluative measurement since there are no letter grades involved, and the teachers enjoy the idea of mastering the objectives as opposed to receiving a letter grade or written evaluation from the facilitators.

Some of the areas of concern in implementing the inservice training workshop for teachers were teachers who were not interested in the historical information or theory associated with computers that was presented, according to the inservice training evaluation completed by the participants. Their main aspiration was to learn how to run the computer using the correct software to complete their administrative tasks in the classroom. Another suggestion from the teachers is to have fewer lectures from the facilitators and more assistance at the computer. However, they did enjoy the vendors who demonstrated software that teachers could use to teach students.

This writer did observe that each teacher that participated had different learning levels and learning styles. In revising the curriculum for the next inservice training, this writer will include instruction for the logical and analytical, artistic and creative, the conservative and detailed learner and the interpersonal and emotional learner. Ornstein and Hunkins (1993) suggests it is important to consider an instructional or curriculum approach that will appeal to all types of learners. These approaches discussed by Ornstein (1993) were behavioral, cognitive, and human approaches to learning.

This writer was amazed that the teachers needed constant reassurance from the facilitators. They would constantly come by the classroom to ask questions, which could be a drawback to the facilitators if they are busy with other projects. Therefore, instead of the teachers just popping in to ask a question about an objective or for help with the computer, the facilitator had to request that teachers schedule appointments for assistance. Moreover, this writer plans to recruit more facilitators in the future for additional assistance in implementing the inservice workshop. At the beginning of the inservice

training, assistance is greatly needed. However, toward the middle of the inservice training, enough teachers had gained skills and were able to assist other teachers.

The hour and a half that was scheduled for the inservice training was not enough time. On several occasions the inservice workshops went overtime, which again was inconvenient for the facilitator. When planing the calendar for the next inservice workshop, this writer will increase the schedule either to two hours once a week or the same hour and a half twice a week.

All in all, the concerns were easy to adjust to, because of the flexibility of the facilitators who were pro-active and anticipated some of the concerns that emerged. This writer recognizes that there is a need for inservice training for teachers at the school site. This writer also senses that there will be more schools that will have this reliable type of inservice training for the teachers in the future.

Recommendations

There are six recommendations that seem appropriate at this time.

1. When planning for instruction, the learning levels and styles of participants should be taken into consideration.
2. Sufficient time should be allocated for instruction, and teachers should make appointments with the facilitators for assistance.
3. Instructional support for participants should be available other than during the inservice training.
4. Facilitators should anticipate problems that might occur and be flexible to handle unexpected events.
5. Have additional resources and guest speakers in case one has to cancel.
6. Keep a journal for each inservice workshop and a telephone log of resources and technical support.

Dissemination

A positive response was received by this writer by a member of the district technology committee who has invited this writer to share the inservice training with the committee members. This writer will submit this practicum paper to the teachers' union, which will also implement an inservice training for teachers. This writer was invited to present this praticum paper at the Computer Using Educators (CUE) conference in October 1994. The possibility of having an inservice training for parents on using the computers to help their children with homework and class work assignments was discussed. Finally, it is planned to have the practicum paper placed on the Electronic Retrieval Information Computer (ERIC).

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APPENDICES

APPENDIX A
COMPUTER NEEDS ASSESSMENT FOR TEACHERS

COMPUTER NEEDS ASSESSMENT

FOR TEACHERS

PURPOSE

Following are questions designed to assist in assessing the usage of computers by teachers in the classroom for administrative tasks. A summary will be made from the responses so that specific needs can be identified. This summary will provide the basis for determining goals and objectives for a teacher support system using computers.

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1. List the types of computer equipment or software available for teachers use.

2. To your knowledge, is the computer equipment or software current?

   Yes_____ No_____

3. Is your classroom wired for connection to a central mainframe?

   Yes_____ In district_____ Outside of district_____ No_____

4. Place a check next to the item that best describes the types of information about technology that is available to you.

   ____Technology literature
   ____Educational software
   ____Integrated software
   ____Technological research
   ____Computer hardware
   ____Multi-media
   ____Teacher inservice
   ____Other _____

5. Have you ever used the following types of software? Please check

   ____Microsoft Works
   ____Lotus 123
   ____Windows 3.1
   ____Professional Write
   ____Desk Top Manager
   ____Word Perfect 5.0
   ____Os/2 2.1
   ____Other_____

6. How would you rate yourself in terms of computer competency? Please circle one.

____Very proficient _____Limited proficiency _____Unskilled

7. In what areas of technology would staff training be useful for you? Circle your responses.

A. Integrating technology into the curriculum

B. Operating the equipment

C. Selecting the appropriate materials

D. Using technology to support teachers administrative tasks

E. Acquire information about educational technology

F. Other areas _____

8. To your knowledge are any funds available to your department., core, or school for training, equipment, materials, or resources?

_____Yes _____No _____Not sure

9. Would you be willing to work on a technology grant committee?

_____Yes _____No _____Not sure

10. What are your priorities for technological funding? Please rank from the lowest to the highest with (1) being the highest and (4) being the lowest.

____Computer equipment _____Computer software _____Staff training

Other please specify_____

11. Do you have a computer at home?

Yes_____ What type?_____ No_____

12. Do you have access to a computer at school?

Yes_____ Sometimes_____ What type?_____ No_____

13. Would you like to have a computer in your classroom permanently?

Yes_____ No_____ Not sure_____

14. Please indicate which brand you would prefer.

_____Apple _____Macintosh _____IBM _____Tandy

Other please specify_____

15. On a Scale from 1-9, (1) being the lowest and (9) being the highest, would you prefer to share a computer with the following?:

Dept._____ Core_____ None_____

16. Would you be interested in computer networking with other teachers on your campus?

Yes_____ No_____ Not sure_____

17. Would you be interested in computer networking with other educators off campus?

Yes_____ No_____ Not sure_____

18. What problems do you perceive in order to increase the use of computers in the classroom?

19. Are there any plans for lessening teacher paper work overload by using computers? Please check one answer.

Yes_____ No_____ Not sure_____

20. Would you be interested in an administrative tasks support system for teachers , using computers ?

Yes_____ No_____ Not sure_____

21. Do you believe that you are computerphobic?

Yes_____ No_____ Not sure_____

22. If given the opportunity to learn how to use a computer to assist in certain administrative tasks in your classroom, would you be interested?

Yes_____ No_____ Not sure_____

23. Have you had any computer classes?

Yes_____ No_____ Not sure_____

24. I am not involved with computers at my school site because: Check all applicable statements.

_____ Administration unsupportable
_____ Inservice not offered
_____ Not interested
_____ Inappropriate equipment
_____ No time to train
_____ No computer skills
_____ Unavailable funds
_____ Unaccessible

25. Would you like to serve on a computer support group committee?

Yes_____ No_____ Not sure_____

Comments:

APPENDIX B
SELF-EVALUATION OF COMPUTER SKILLS

SELF EVALUATION OF COMPUTER SKILLS

NAME:_____DATE:_____

1. Please rate yourself to your actual hands-on work with wordprocessing:

Never have used a word processor _____
Have just begun to use word processor _____
Have had limited experience with word processor _____
Use a word processor fairly frequently _____
Quite competent with a word processor _____

Please identify any wordprocessing programs you are presently using:

_____

2. Please rate yourself on your understanding of computer systems:

Never have used a computer _____
Have just begun to use a computer _____
Have had limited experience with a computer _____
Use a computer fairly frequently _____
Quite competent with a computer _____

Please identify the computer system with which you are familiar:

_____

3. I am familiar with the use and operation of a spreadsheet program:

No_____ Somewhat_____ Yes_____ Use it frequently_____

Please identify spreadsheet programs you are presently using:

_____

4. I am familiar with the use and operation of a database

No_____ Somewhat_____ Yes_____ Use it frequently_____

Please identify any database programs you are presently using

_____

5. I am familiar with the use and operation of telecommunications

No_____ Somewhat_____ Yes_____ Use it frequently_____

Please identify any telecommunication program you are presently using:

_____

APPENDIX C
COMPUTER KEYBOARDING LITERACY

COMPUTER KEYBOARDING LITERACY

NAME:_____ DATE:_____

A. FILL IN ANSWERS

1. Requires a shift key. _____
2. A person who designs and writes programs. _____
3. Information given to computer. _____
4. Information the computer gives back. _____
5. Load up and power on. _____
6. Takes you back to the menu. _____
7. To omit, erase, etc.. _____
8. Physical parts of a computer system. _____
9. Machine that inputs, processes, stores and outputs data or information. _____

B. TRUE OR FALSE

1. When diskette is not in use, it should be laid on the monitor or drive so it won't be damaged. _____
2. Write on a floppy label in felt tip but avoid pens or pencils. _____
3. Printers are computer hardware, and considered an input item. _____
4. Keep diskettes in envelope when not in use. _____
5. Does not hurt if you touch exposed surface of diskette. _____
6. Keep diskettes out of sunlight but extreme temperatures will not hurt diskette. _____
7. If computer is not being used, do not leave floppy disk drive especially for a prolong time. _____
8. The monitor displays information from the computer and is an input item. _____
9. The keyboard is how we talk to the computer and is an input item. _____

COMPUTER KEYBOARDING LITERACY

10. The CPU is the heart or brain of the computer. _____

C. MULTIPLE CHOICE (CHOOSE BEST ANSWER)

1. Instructions given to a computer,
A. Software B. Menu C. Output D. Program E. Hardware. _____

2. Initialize a disks means,
A. Put initials on disk B. Put name on disks C. Format disks. _____

3. To shut off disk drive,
A. Control/escape, B. Control/reset C. Control open. _____

4. When disk drive red light is on never,
A. Control/reset B. Shut computer off C. Load or unload floppy disk. _____

5. Operates the diskette,
A. Disk drive B. CPU C. Keyboard D. Program. _____

6. A flexible plastic device used to store computer information,
A. Label B. Hardware C. Diskette D. Jacket. _____

7. Which item is not part of the floppy?
A. Read /write window B. Jacket C. Write protect notch
D. Disk E. Label F. Hub. _____

8. Which item is not hardware?
A. Monitor B. Diskette C. CPU D. Disk drive. _____

9. Which item is not software?
A. Floppy B. Diskette C. Programs D. Disk drive _____

10. Does not require a shift key.
A. Upper case B. Capitals C. Lower case D. Middle case _____

APPENDIX D
SPREADSHEET OBSERVATION CHECKLIST

OBSERVATION CHECKLIST

NAME:_____DATE:_____

Objectives for SPREADSHEET use.

Complete all specified spreadsheet activities.

Become familiar with the spreadsheet functions.

Spreadsheet commands. _____

Entering text and numbers. _____

Adding formulas and functions. _____

Formatting the spreadsheet. _____

Printing. _____

To create, edit, format, save and retrieve a file using the spreadsheet.

Steps in creating a spreadsheet. _____

Selecting the spreadsheet. _____

The Goto Command _____

Menus. _____

Canceling a command _____

Scrolling _____

Locks. _____

Using the copy to repeat formulas. _____

Saving and adding files. _____

Adding a file. _____

Aligning and adjusting columns. _____

Retrieving a file. _____

Adding additional text _____

Editing a cells content _____

Work independently. _____

APPENDIX E
WORDPROCESSING OBSERVATION CHECKLIST

OBSERVATION CHECKLIST NAME:_____DATE:_____

Objectives for WORDPROCESSING

Become familiar with the use of word processing

Complete all six activities on word processing

Entering text _____

Editing text _____

Formatting characters _____

Formatting paragraph _____

Changing the layout _____

To create, edit, format, save, and retrieve a file using wordprocessing

Creating a document _____

Cursor movement _____

Formatting _____

Printing a file _____

Closing a file _____

Opening an existing file _____

Editing a text _____

Work independently _____

Wordprocessing End-Product for Evaluation

Using either the "print screen" or "control P" command to print hard copy of the contents frame showing a form for referral, weekly progress report. and letter to parent. Name and date on paper before submitting

APPENDIX F
SOFTWARE OBSERVATION CHECKLIST

OBSERVATION CHECKLIST NAME_____DATE_____

SOFTWARE

Objectives:

To describe functions of software. ____

To explain the importance of software. ____

To name the three major categories of software that work at the same time with the computer. ____

To describe software that allows a user to keep track of a library file. ____

To describe how a spreadsheet would be useful in the home. ____

To explain how telecommunication software would be beneficial in the educational work setting. ____

To explain the term "integrated" package and how it could be used. ____

To describe the difference between Microsoft Works and Aieus software. ____

To list various types of software packages. ____

APPENDIX G
TECHNOLOGY INSERVICE TRAINING
CONCLUDING EVALUATION

TECHNOLOGY IN-SERVICE TRAINING
CONCLUDING EVALUATION

Position_____ Assignment_____

What did you like BEST about the in-service training?

What did you like LEAST about the in-service training?

Additional comments and remarks (Please include suggestions).

Over all rating of inservice training

Completely satisfied 5 4 3 2 1 Absolutely dissatisfied

APPENDIX H
BASIC COMPUTER SKILLS

BASIC COMPUTER SKILLS INVENTORY

NAME_____ DATE_____

PLEASE CIRCLE THE CORRECT RESPONSE

Can you identify and locate parts of a computer?

Yes No

Can you turn on the computer?

Yes No

Can you load and unload the disc?

Yes No

Can you move the mouse around?

Yes No

Can you use the mouse to select functions?

Yes No

Can you open the software windows?

Yes No

Can you select and retrieve the spreadsheet?

Yes No

Can you select and retrieve the wordprocessing software?

Yes No

Can you turn on the printer?

Yes No

Can you load the paper in the printer?

Yes No

Can you print out a document?

Yes No

Do you feel at ease using the computer?

Yes No

APPENDIX I
RESULTS OF SURVEY

RESULTS OF SURVEY

Out of the 25 teachers surveyed:

Twenty indicated they had limited proficiency or were unskilled in using a computer.

Sixteen are not aware of funds available for training, equipment, materials, or resources.

Nineteen did not know how to enter course grades, generate referrals, keep attendance, or complete other administrative tasks using a computer.

Three are computerphobic.

Twelve indicated they do not have access to a computer on site.

Nineteen do not know the type of computer or software available for teachers to use.

Thirteen do not know if the computer hardware and software is current.

Twenty-three do not know if their classroom is wired for cable or mainframe.

Seventeen do not know how to integrate technology into the classroom

Fourteen do not know how to operate any type of technology.

Eleven do not know how to select or evaluate appropriate hardware or software.

Twenty-five do not know of any plans for improving teacher's paperwork overload.

Teachers are not involved with computers because:

District administration is non-supportive in providing technology for teachers.

Inservice training for teachers to learn technology is not offered.

They are not interested in using technology.

Only inappropriate equipment is offered for teachers to use.

They do not have the time to train.

They have low computer skills.

They believe funds are unavailable for teachers to purchase equipment.

Hardware and software is inaccessible.